

Summary of CalPERS' CEM report results for the 5-year period ended December 31, 2005



The annual CEM benchmarking report compares CalPERS' return performance for the 5 year period ended December 31, 2005, relative to CEM's database of \$2.0 trillion in participating US Defined Benefit pension fund assets. CEM Benchmarking Inc. is a global benchmarking company based in Canada.

The CEM report also compares CalPERS' cost performance relative to a custom peer group of the top 10 funds by asset size in CEM's database. By design, the peers were selected because they were the closest in size to CalPERS. Why? Because size impacts costs. The average size of CalPERS' peers was \$80 billion versus CalPERS' \$201 billion at the end of 2005.

CalPERS' performance relative to the US DB pension universe and peers, in the areas that we measure, are shown below:

1. Policy Return

- CalPERS' 5-year Total Policy Return was 4.7%. This compares to the U.S. median of 5.2% and CalPERS' peer median of 5.2%. Total Policy Return is the return that could have been earned from implementing policy asset mix decisions by investing passively in benchmark portfolios.

Differences in benchmarks used, relative to the US universe, was the main reason for CalPERS' lower policy return over this 5-year period. Though there were some differences in policy asset mix relative to their peers and the US universe, the impact of these differences were mainly offsetting during this time period.

2. Implementation Value Added

- CalPERS' 5-year Implementation Value Added was 1.0% per annum, or approximately \$1.7 billion per year. This compares to the U.S. median of 0.8% and above CalPERS' peer median of 0.5%. Implementation value added is the contribution from active management.

3. Implementation Risk

- CalPERS' 5-year Implementation Risk was 1.4%. This compares to the U.S. median of 1.3% and CalPERS' peer median of 1.1%.

4. Costs

- For 2005, CEM estimates that CalPERS was low cost by 6.2 basis points or \$120 million. CalPERS' Total Cost of 23.3 bps was below their Benchmark Cost of 29.5 bps. The Benchmark cost is the cost CEM estimates CalPERS should have been spent, given how much CalPERS' peers paid for the management of various assets and services. By using peer cost information the Benchmark Cost adjusts for both size and asset mix which are the two main uncontrollable factors that impact costs.

5. Cost Effectiveness

- For 2005, CalPERS was in the positive value added, low cost quadrant of CEM's Cost Effectiveness graph. CEM's Cost Effectiveness ranking combines active management production and cost performance.

This benchmarking report compares your cost and return performance to CEM's extensive pension performance database.

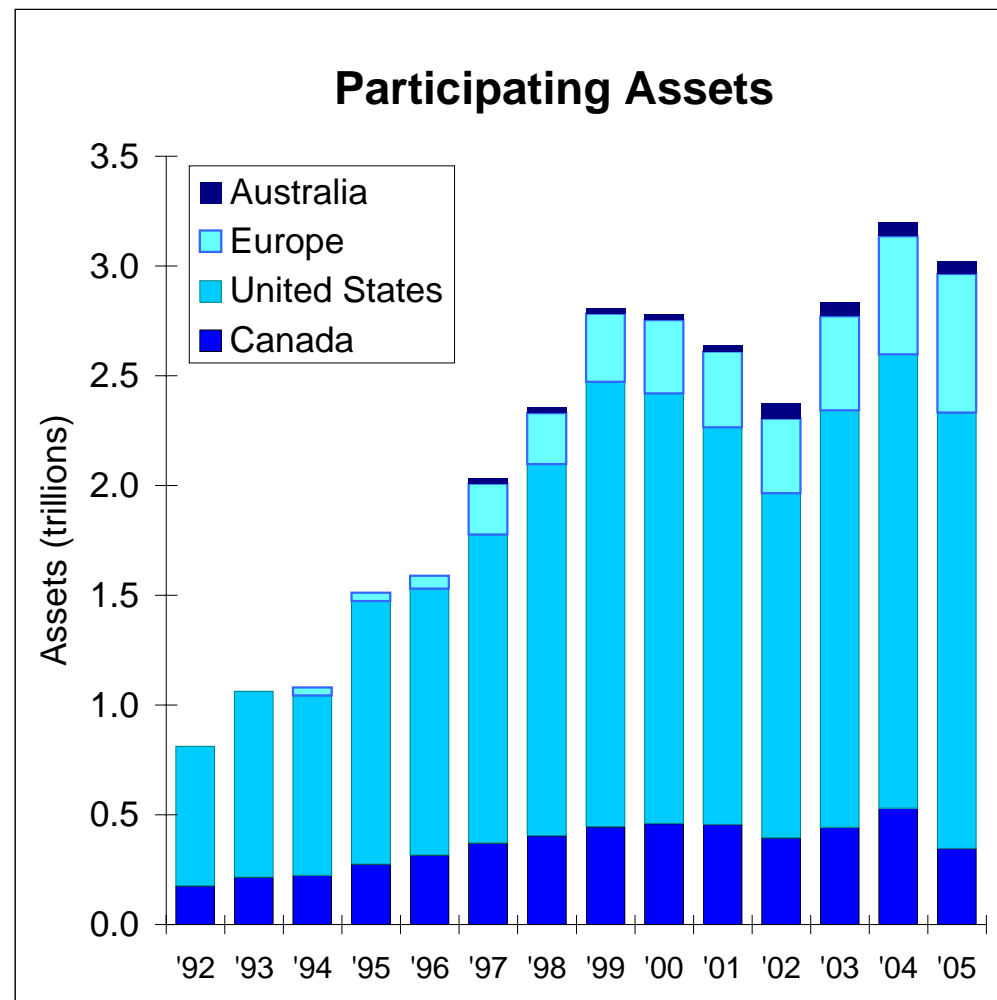
- 136 U.S. pension funds participate. They represent 30% of U.S. defined benefit assets. The median U.S. fund had assets of \$4.7 billion, while the average U.S. fund had assets of \$14.6 billion. Total participating U.S. assets were \$2.0 trillion.

- 88 Canadian funds participate representing 70% of Canadian defined benefit assets.

- 19 European funds participate with aggregate assets of €633 billion. Included are funds from The Netherlands, Norway, Sweden, Finland, France and Ireland.

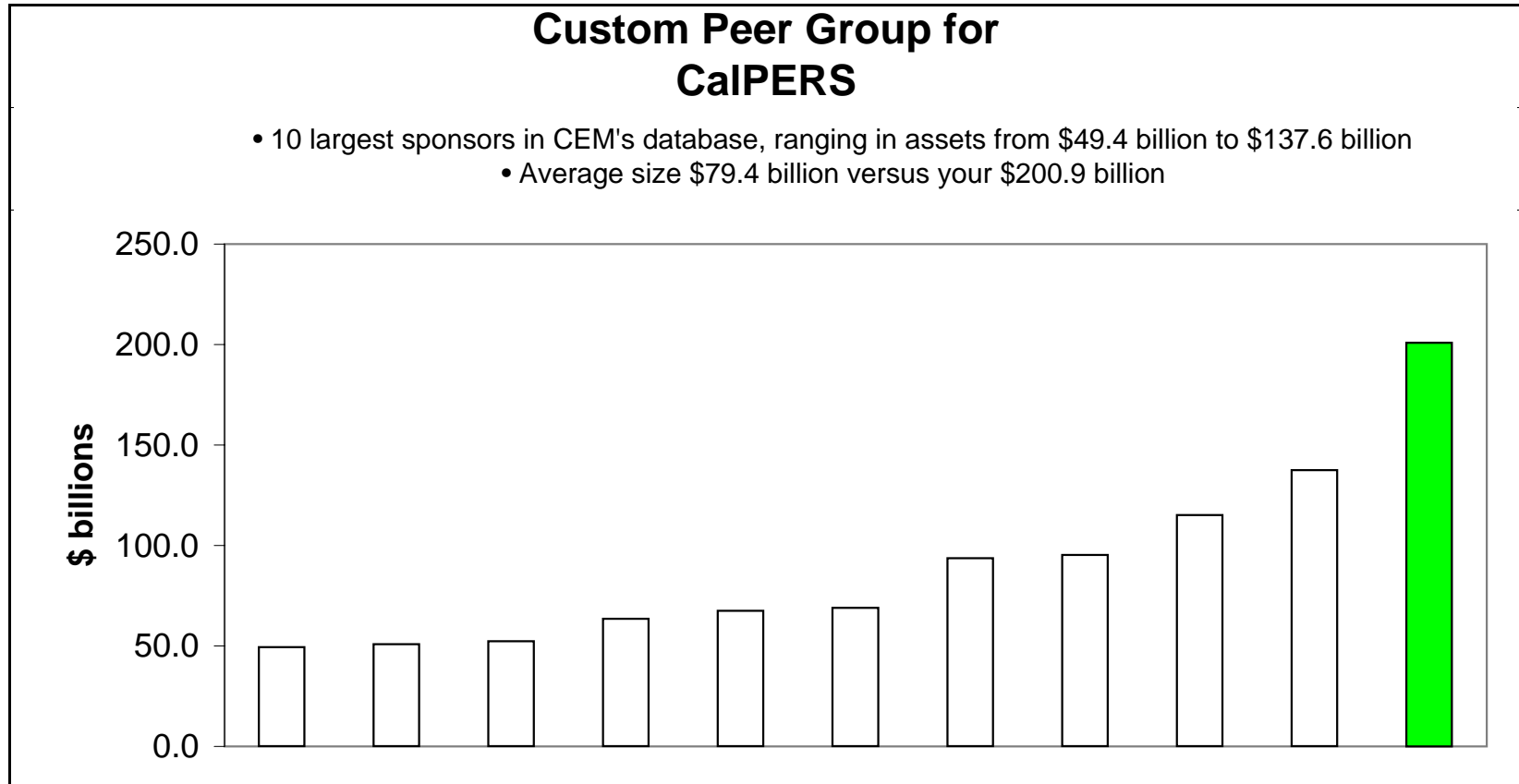
- 5 Australian funds participate with aggregate assets of A\$57.0 billion.

The most meaningful comparisons for your returns and value added are to the U.S. Universe.



The most valuable comparisons for cost performance are to your custom peer group because size impacts costs.

Note: In order to not skew your peers' results, your fund was not included in the peer group.



In order to preserve client confidentiality, we do not disclose your peers' names in this document because of the Freedom of Information Act.

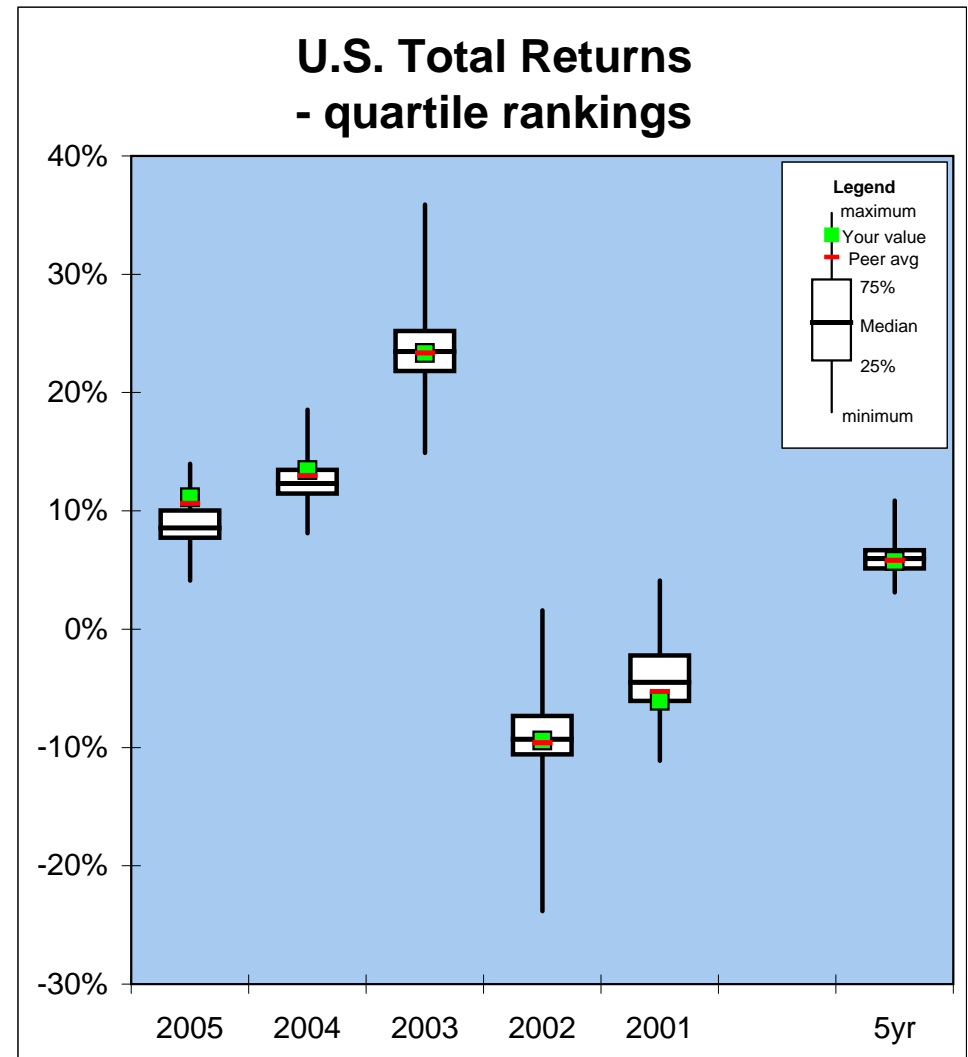
Total Returns, by themselves, are the wrong thing to compare and focus on.

Total Returns do not tell you the reasons behind good or bad relative performance.

Therefore, we separate Total Return into its more meaningful components - Policy Return and Implementation Value Added.

CalPERS 5-yr	
Total Fund Return	5.76%
Policy Return	4.75%
Implementation Value Added	1.01%

This approach enables you to understand the contribution from both policy asset mix decisions (which tend to be the Board's responsibility) and implementation decisions (which tend to be management's responsibility).



1. Policy Returns

CalPERS 5-year Policy Return of 4.7% was below the U.S. median of 5.2%.

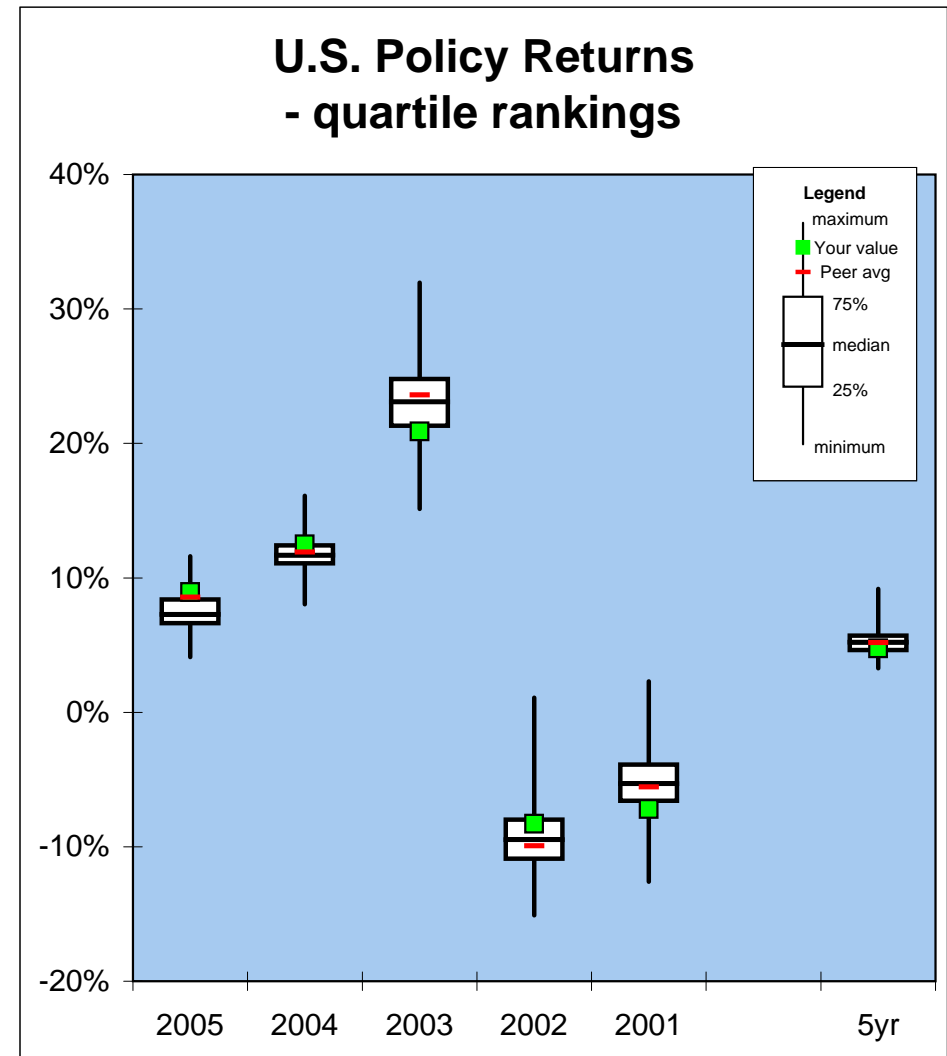
Your Policy Return is the return you could have earned passively by indexing your investments according to your investment policy asset mix.

Having a higher or lower relative Policy Return is not necessarily good or bad. This is because your policy return reflects your investment policy, which should reflect your:

- Long term capital market expectations
- Liabilities
- Appetite for risk

Each of these three factors is different across funds. Therefore, it is not surprising that Policy Returns often vary widely between funds.

The median 5-year Policy Return of your Peers was 5.2%.



**1. Why does
Policy Return differ
from average?**

Despite some differences between CalPERS policy asset mix relative to the US average, as shown in the table below, these differences were not the reason for your 5-yr policy return.

- That is because the policy asset mix differences were generally offsetting. For example, your higher Real Estate & REITS policy weight (your 8% versus a US avg of 4%) had a positive impact since Real Estate was one of the best performing asset class over the last 5 years. However, this was offset by the negative impact of your lower Small Cap weight (your 0% versus a US 5-yr average of 5% allocated specifically to Small Caps). Small Caps greatly outperformed Large Caps over the last 5 years.

5-year Average Policy Asset Mix			
Asset Class	CalPERS	Peer Avg	US Avg
Large Cap & Broad Mkt U.S. Stock	39%	40%	40%
Small Cap Stock	0%	1%	5%
EAFE and Global Stock	19%	17%	15%
Emerging Mkt Stock	<u>0%</u>	<u>1%</u>	<u>1%</u>
Total Stock	58%	59%	61%
Fixed Income - Broad Market	23%	24%	26%
Fixed Income Other	3%	3%	3%
Cash	<u>0%</u>	<u>1%</u>	<u>1%</u>
Total Fixed Income	27%	27%	30%
Real Estate & REITS	8%	7%	4%
Hedge Funds (your RMARS)	0%	1%	1%
Private Equity (your AIM)	6%	6%	3%
Total	100%	100%	100%

**1. Why does your
Policy Return differ from
the average?**

CalPERS 5-year Policy Return was below the US median primarily because of differences in benchmark portfolios.

• In particular, the negative impact of your lower 5-yr benchmark return for your AIM program. Your 5-yr benchmark return was -3.4% versus a US 5-yr average benchmark return of 5.8%. You use the Custom Venture Economics Index* which is based on actual private equity returns.

* Some US funds use the same or a similar benchmark. However, some US funds use a stock market index plus some hurdle rate such as +5%, +3%, etc. This is an asset class where there is great diversity in benchmarks used. Normally CEM insists on an investable benchmark and therefore, we believe that using the benchmark that best reflects the universe that you are invested in makes the most sense - rather than specifying a benchmark for all funds to use. Our rule is not maintained for this asset class because many funds are in this asset class instead of being in public stocks. Thus, they feel that a stock market index plus a hurdle to reflect higher risks and costs is the most appropriate benchmark for this asset class.

5-year Average Benchmark Returns			
Asset Class	CalPERS	Peer Avg	US Avg
Large Cap & Broad Mkt U.S. Stock	1.4%	1.3%	1.4%
Small Cap Stock	n/a	6.6%	7.3%
EAFE and Global Stock	6.1%	5.3%	5.2%
Emerging Mkt Stock	<u>n/a</u>	<u>18.1%</u>	<u>18.0%</u>
Total Stock	3.0%	3.2%	3.2%
Fixed Income - Broad Market	7.2%	6.2%	6.1%
Fixed Income Other	8.0%	9.0%	8.5%
Cash	<u>2.4%</u>	<u>2.2%</u>	<u>2.3%</u>
Total Fixed Income	7.2%	6.3%	6.4%
Real Estate & REITS	11.3%	12.2%	12.5%
Hedge Funds (your RMARS)	n/a	4.5%	3.4%
Private Equity (your AIM)	-3.4%	7.2%	5.8%

What was the actual
Return by Asset Class?

The chart below compares CalPERS 5 year average actual returns by asset class relative to peers and the US universe.

Despite your lower 5-yr benchmark return for your AIM program relative to the US 5-yr average benchmark return (your -3.4% versus 5.8% respectively), the actual return earned for this asset class is similar to the US average (your 5-yr actual gross (before fees) return of 2.8% compares to a US 5-yr average actual gross return of 3.9%).

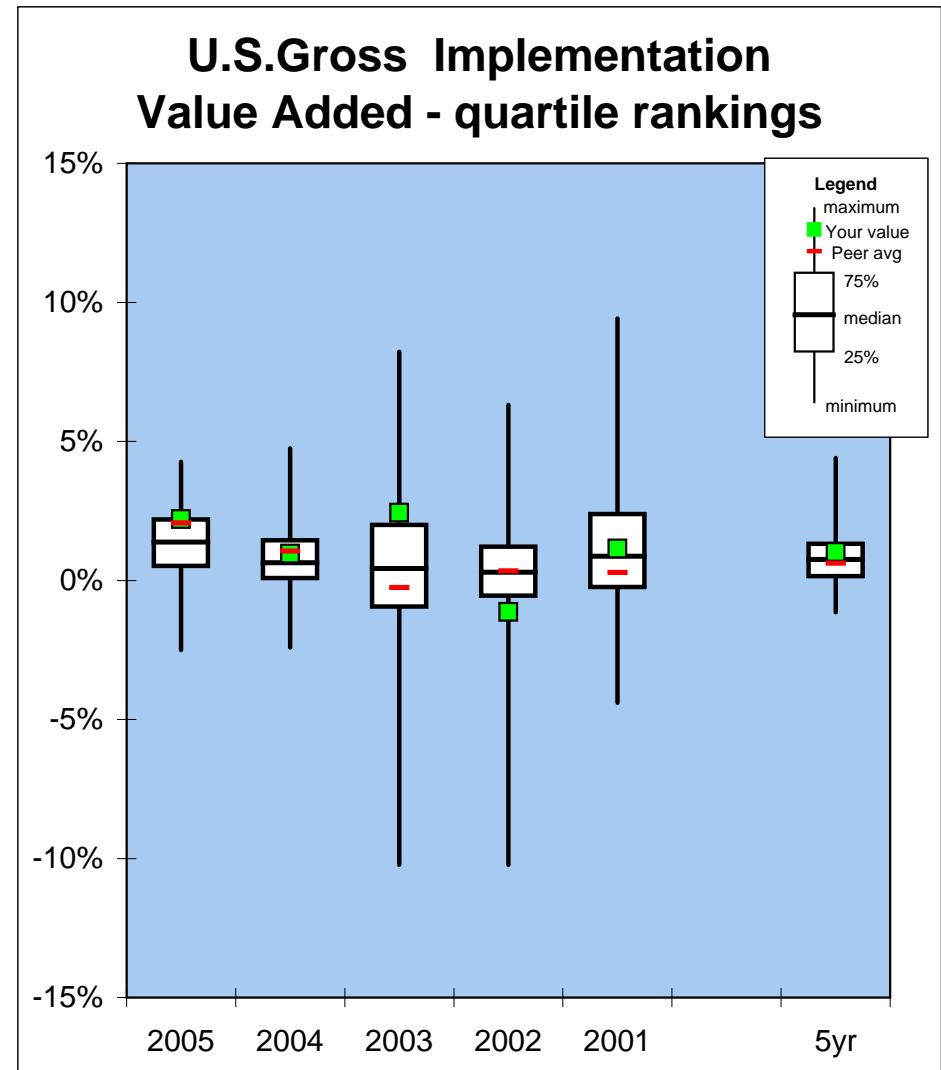
5-year Average Actual Returns			
Asset Class	CalPERS	Peer Avg	US Avg
US Stock	1.7%	1.6%	2.3%
Small Cap Stock	n/a	6.3%	8.1%
EAFE and Global Stock	3.1%	3.4%	1.8%
Emerging Mkt Stock	<u>n/a</u>	<u>20.7%</u>	<u>18.5%</u>
Total Stock	3.9%	3.9%	4.5%
Fixed Income - Broad Market	7.7%	6.4%	6.7%
Fixed Income Other	10.4%	8.7%	8.0%
Cash	<u>2.6%</u>	<u>2.4%</u>	<u>2.8%</u>
Total Fixed Income	7.8%	6.8%	7.0%
Real Estate & REITS	21.2%	15.5%	13.7%
Hedge Funds	n/a	6.9%	4.7%
Private Equity	2.8%	7.5%	3.9%

2. Implementation Value Added

Implementation Value Added is the component of your Total Return from active management. CalPERS 5-yr Implementation Value Added was 1.0%.

- CalPERS 1.0% compares to a 5-yr U.S. median of 0.8% and a peer median of 0.5%.
- In dollars, CalPERS 1.0% additional value added converts to approximately \$1.7 billion a year.
- Implementation value added equals your actual return minus your policy return. Implementation value added can be further broken down into value added from "In-Category" decisions (i.e., actual returns in each asset category minus benchmarks) and value added from "Mix" (i.e., value added resulting from differences between your actual versus your policy asset mix).

CalPERS					
Year	Actual Return	Policy Return	Implementation Value Added		
			Total	In-Category	Mix
2005	11.1%	8.9%	2.2%	3.5%	-1.3%
2004	13.5%	12.5%	1.0%	1.9%	-0.9%
2003	23.3%	20.9%	2.4%	1.6%	0.9%
2002	-9.4%	-8.3%	-1.1%	-0.6%	-0.5%
2001	-6.1%	-7.2%	1.1%	1.1%	0.0%
5-yr	5.8%	4.7%	1.0%	1.5%	-0.5%



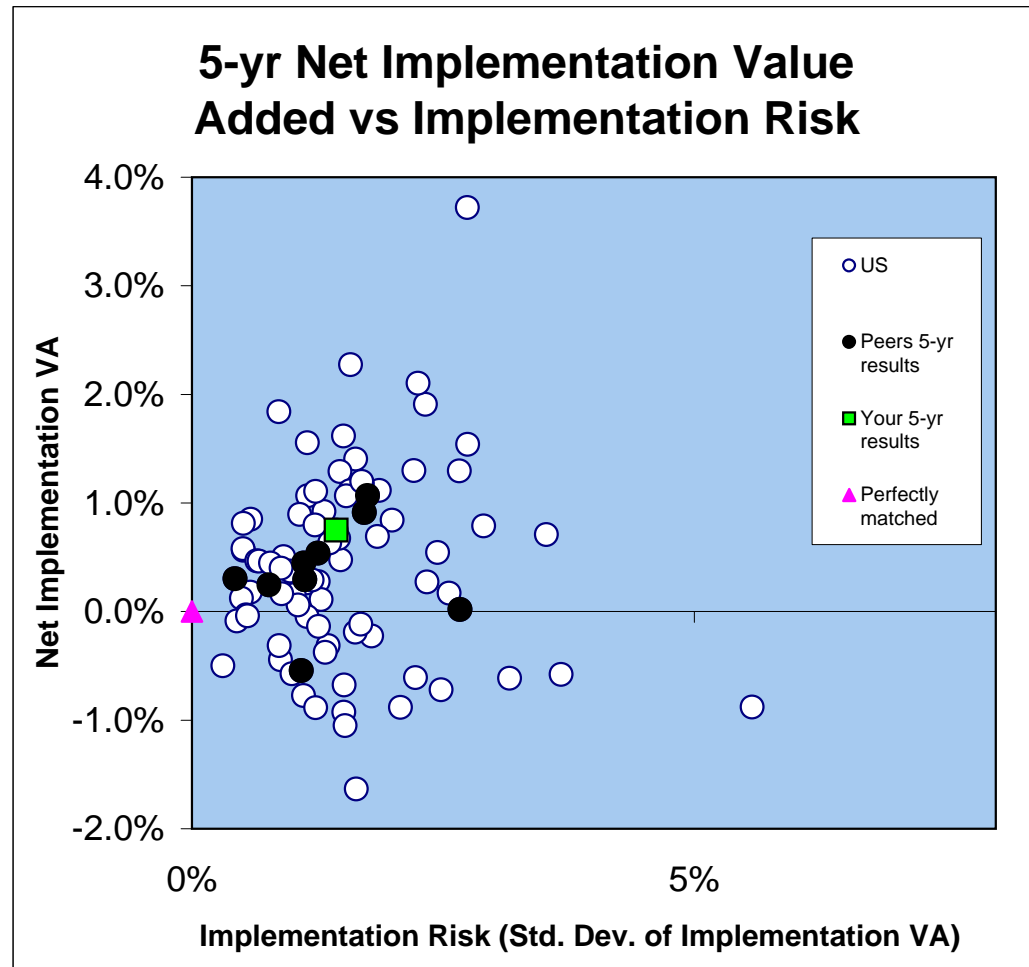
3. Implementation Risk

CalPERS 5-yr Implementation Risk of 1.4% was slightly above the U.S. median of 1.3%.

"Implementation Risk" is the risk of active management. CEM defines Implementation Risk as the standard deviation of your Net Implementation Value Added.

Net Implementation Value Added equals gross Implementation Value Added minus asset management costs. Your 5-year Net Implementation Value Added was 0.7% (1.0% gross minus 0.3% costs).

There was a positive relationship between Implementation Risk and Value Added over the past 5 years. On average, funds that took more Implementation Risk earned more Implementation Value Added.



4. Costs (Total)

CalPERS asset management costs (including Oversight) in 2005 were \$454.6 million or 23.3 basis points.

- CEM collects investment costs by major asset classes and 4 different implementation styles.
- Oversight, Custodial & Other cost includes all costs associated with the oversight and administration of the investment operation, regardless of how these costs are paid. Costs pertaining to benefit administration, such as preparing checks for retirees, are specifically excluded.

CalPERS Investment Management Costs (\$000s)					
	<u>Internal</u>		<u>External</u>		
	Passive	Active	Passive	Active	Total
US Stock - Large Cap	693	733		17,340	18,765
US Stock - Small Cap	42				42
Stock - EAFE	149		5,400	13,896	19,445
Stock - Emerging				19,562	19,562
Fixed Income - US		2,667			2,667
Fixed Income - Foreign				6,114	6,114
Fixed Income - High Yield		233		7,046	7,279
Fixed Income - Mortgages		510			510
Cash		139			139
REITs		236			236
Real Estate ex-REITs				141,924	141,924
Hedge Funds - not Fund of Funds				20,075	20,075
Venture Capital/LBO				183,671	183,671
Overlay Programs					3,453
Investment Costs Internal and External		5,402		415,028	
Total Investment Management Costs				21.7bp	423,884

CalPERS Oversight, Custodial and Other Asset Related Costs (\$000s)		
Oversight of the Fund		17,225
Trustee & Custodial		10,189
Consulting and Performance Measurement		2,746
Audit		539
Other		
Total Oversight, Custodial & Other Costs	1.6bp	30,698

Total Asset Management Costs in \$000s	23.3bp	454,582
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4. Costs
- Are they high or low?

Benchmark Cost analysis suggests that CalPERS was low cost.

To assess your cost performance, we start by calculating your Benchmark Cost. Your Benchmark Cost is an estimate of what your cost would be given your asset mix and the median costs that your peers pay for similar services.

	in \$000's	basis points
CalPERS Total Cost	454,582	23.3 bp
CalPERS Benchmark Cost	<u>574,741</u>	<u>29.5 bp</u>
CalPERS Excess Cost	-120,158	-6.2 bp

Your Total Cost of 23.3 bp was lower than your Benchmark Cost of 29.5 bp. Thus, your fund's Excess Cost was -6.2 bp, suggesting that your fund was low cost.

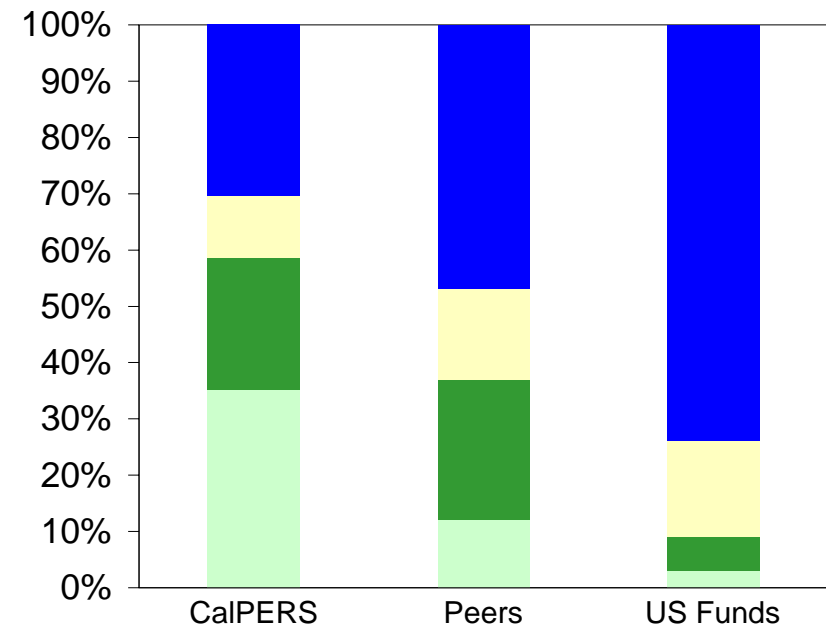
The following pages review reasons behind your low cost status.

4. Costs Is it Style?

You used less external active management than your peers (30% versus 47% for your peers).

- External active management is much more expensive than internal management, or external passive management.

Implementation Style



■ External active	30%	47%	73%
■ External passive	11%	16%	17%
■ Internal active	23%	25%	6%
■ Internal passive	35%	12%	3%

4. Costs - Impact of Style

Your lower use of external active management saved you 3.1 bp relative to your peers. Other differences in implementation style saved you 1.1 bp.

Impact of Differences in Use of External Active Management					
	Average Holdings \$ M	External Active			Dollar Impact \$000
		Holdings % of asset class		Cost	
		CalPERS%	Peer Avg%	Premium ^{1,2}	
US Stock - Large Cap	75,519	17.1%	28.1%	24.6	-20,492
US Stock - Small Cap	365	0.0%	48.9%	42.5	-760
Stock - EAFE	38,979	28.0%	64.0%	23.6	-33,099
Stock - Emerging	4,147	100.0%	79.1%	61.9	5,375
Fixed Income - US	32,981	0.0%	35.6%	8.9	-10,401
Fixed Income - Foreign	5,796	100.0%	N/A	N/A	
Fixed Income - High Yield	1,825	72.7%	94.3%	36.8	-1,453
Fixed Income - Mortgages	6,232	0.0%	N/A	N/A	
REITs	493	0.0%	53.1%	28.3	-740
Real Estate ex-REITs	13,155	100.0%	68.8%	20.9	8,598
Hedge Funds	1,442	{ 100.0%	100.0%	N/A	
Fund of Funds ⁴		0.0%	0.0%		
Alternatives (your AIM)	24,549	{ 100.0%	98.6%	N/A	
Fund of Funds ⁴		0.0%	1.4%	205.6	-7,103
Total		30.3%	46.7%		-60,075
External Active Impact in bps					-3.1 bp
Impact of differences in the cost and use of lower cost styles ³					-1.1 bp
Total Style Impact					-4.2 bp

1. External Active Cost Premium is the additional cost of external active management relative to the average of other lower cost implementation styles - internal passive, internal active and external passive.

2. An external Active Cost Premium of 'N/A' Indicates that there was insufficient peer data to calculate the premium. This is most often a result of insufficient peer lower cost' implementation style data.

3. The 'Impact of differences in the cost and use of lower cost styles' quantifies the net impact of your relative use of, and the cost differences between, internal passive, internal active and external passive management.

4. External Fund of Funds is often the most expensive implementation style when all costs are considered.

4. Costs -
Are you paying
more for similar
services?

The net impact of differences in External Investment Management costs saved you 1.6 bp.

Impact of Differences in External Investment Management Costs				
	CalPERS 2005		Peer Median in bp	Impact of the difference in \$000s
	Avg Holdings in \$mils	Costs in bp		
US Stock - Large Cap - Active	12,889	13.5	26.4	-16,719
Stock - EAFE - Passive	21,386	2.5	1.6	1,924
Stock - EAFE - Active	10,915	12.7	29.2	-17,998
Stock - Emerging - Active	4,147	47.2	73.5	-10,923
Fixed Income - Foreign - Active	5,796	10.5	N/A	N/A
Fixed Income - High Yield - Active	1,326	53.1	40.5	1,668
Real Estate ex-REITs - Active	13,155	107.9	59.8	63,319
Hedge Funds (your RMARS) - Active	1,442	139.2	96.4	6,175
Alternatives (your AIM) - Active	24,549	74.8	98.5	-58,077
Total External Investment Management Impact in \$000s				-30,632
Total External Investment Management Impact in basis points				-1.6 bp

* 'N/A' indicates insufficient peer data to do meaningful comparisons.

4. Costs -
Are you paying
more for similar
services?

The net impact of differences in Internal Investment Management costs saved you 0.2 bp.

Impact of Differences in Internal Investment Management Costs				
	CalPERS 2005		Peer Median	Impact of the difference in \$000s
	Avg Holdings in \$mils	Costs in bp		
US Stock - Large Cap - Passive	61,536	0.1	0.2	-588
US Stock - Large Cap - Active	1,094	6.7	5.3	158
US Stock - Small Cap - Passive	365	1.2	N/A	N/A
Stock - EAFE - Passive	6,677	0.2	N/A	N/A
Fixed Income - US - Active	32,981	0.8	2.0	-3,779
Fixed Income - High Yield - Active	499	4.7	N/A	N/A
Fixed Income - Mortgages - Active	6,232	0.8	N/A	N/A
Cash - Active	4,130	0.3	0.3	0
REITs - Active	493	4.8	4.9	-4
Total Internal Investment Management Impact in \$000s				-4,213
Total Internal Investment Management Impact in basis points				-0.2 bp

* 'N/A' indicates insufficient peer data to do meaningful comparisons.

4. Costs -
Are you paying
more for similar
services?

Your Overlay program added 0.2 bps to your total cost. Most of your peers did not have an Overlay program.

Impact of Differences in Overlay Costs				
	CalPERS 2005		Peer Median in bp	Impact of the difference in \$000s
	Avg Holdings in \$mils	Costs in bp		
Overlay	195,018	0.2 bp	0.00 bp	3,453
Total Impact in basis points				0.2 bp

4. Costs -
Are you paying
more for similar
services?

The net impact of differences in your Oversight, Custodial & Other costs saved you 0.4 bp.

Impact of Differences in Oversight, Custodial & Other Costs				
	CalPERS 2005		Peer Median in bp	Impact of the difference in \$000s
	Avg Holdings in \$mils	Costs in bp		
Oversight	195,018	0.9 bp	0.9 bp	-386
Custodial/Trustee	195,018	0.5 bp	0.6 bp	-2,138
Consulting/Performance Measurement	195,018	0.1 bp	0.3 bp	-2,351
Audit	195,018	0.0 bp	0.0 bp	-338
Other	195,018	0.0 bp	0.1 bp	-1,847
Total Impact in \$000s				-7,059
Total Impact in basis points				-0.4 bp

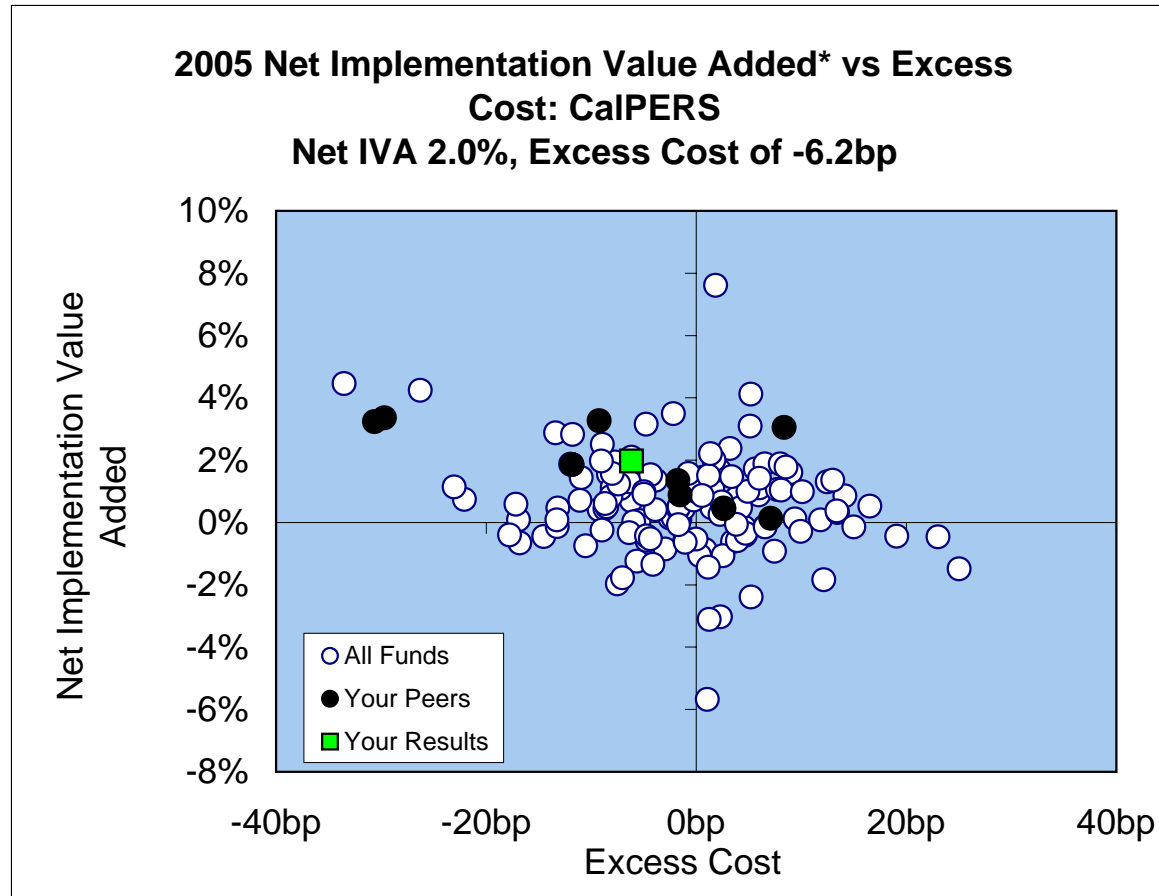
4. Costs - Summary

In summary, the primary reason for CalPERS 'low cost status' was your greater use of lower cost implementation styles such as passive and internal management. A contributing factor was that you generally paid less than your peers for similar services.

CalPERS 2005 Excess Cost Breakdown		
	<i>Impact in in \$000s</i>	<i>Impact in basis points</i>
Impact of:		
Implementation Style Differences		
Less external active management and more lower cost passive and internal management	-60,075	-3.1
Other Style Differences	-21,632	-1.1
	<u>-81,708</u>	<u>-4.2</u>
Paying more or less than your peers for similar services		
External Investment Management Costs	-30,632	-1.6
Internal Investment Management Costs	-4,213	-0.2
Overlay Impact	3,453	0.2
Oversight, Custodial & Other Costs	-7,059	-0.4
	<u>-38,451</u>	<u>-2.0</u>
Total Excess Cost	-120,158	-6.2

**5. Cost
Effectiveness
- 1 year**

For 2005 CalPERS was in the positive value added, low cost quadrant of the Cost Effectiveness Chart.



* Your 2005 Net Implementation Value Added of 2.0% equals your 2.2% gross impl. value added minus your 0.2% total cost.

6. Asset - Liability Mismatch Risk

The largest risk for most pension funds is caused by the mismatch between their assets and their liabilities. To quantify this risk we model your 'neutral asset mix'.

Your Neutral Asset Mix is the combination of nominal and inflation indexed bonds that most closely matches your pension liabilities. It is a proxy for your liabilities. It takes into account the sensitivity of your pension liabilities to changes in real and nominal interest rates.

It reflects:

- Your plan type. You have a Final Average plan. Final Average plans provide close to 100% inflation protection for active members whereas Career Average and Flat Benefit plans provide less than 100% inflation protection to active members.
- Your pension promise in terms of post-retirement inflation protection. You contractually index benefits to retirees with a cap ranging from 2-5%. However, the majority is subject to a 2% cap. Given that inflation was 3.4% last year, we estimated that you contractually indexed 59% of retirees benefits last year.
- The proportion of your membership that is active, deferred and retired. Older plans with more retirees have shorter durations than younger plans with more active members.

CalPERS Neutral Asset Mix		
	Modified Duration	% of Assets
Inflation Indexed Bonds	14.0	74%
Nominal Bonds	17.8	26%
Total		100%

There are two very good reasons why funds do not guarantee their pension liabilities by purchasing their neutral asset mix. First, it is impractical for large funds due to the limited supply of inflation indexed assets. Second, because this low risk strategy also has a lower expected return.